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10/806,508

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John T. Stites

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BANNER & WITCOFF, LTD.  
TEN SOUTH WACKER DRIVE  
SUITE 3000  
CHICAGO, IL 60606

EXAMINER

YOO, JASSON H

ART UNIT

PAPER NUMBER

3714

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DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/806,508	<b>Applicant(s)</b> STITES ET AL.	
	<b>Examiner</b> Jasson H. Yoo	<b>Art Unit</b> 3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-65 is/are pending in the application.
- 4a) Of the above claim(s) 14-65 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/20/06</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The International Search Report for PCT/US2005/009375 listed in the information disclosure statement filed 2/20/06 has been considered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 5, 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Storek (US 2004/0259651) in view of Petrash (US 3,226,704).

1. Storek discloses a self contained instrumented golf club (11 in Fig. 4), the golf club comprising: a first accelerometer module mounted in a head of the golf club; and a second accelerometer module mounted in a shaft of the golf club (Inertial Navigation System 10 in Figs. 1 and 4, paragraphs, 39, 41-44, 49, 51-55, 69).

Storek discloses the accelerometer module is mounted within the head of the golf club but fails to teach the accelerometer is removable. Nevertheless, such modification would have been obvious to one of ordinary skilled in the art. In an analogous art to accelerometers used for golf clubs, Petrash discloses a method of attaching an accelerometer to a golf club (10 in Fig. 1). The accelerometer is removable mounted to

the golf club by a clip (74 in Figs. 1 and 2). The removable accelerometer allows the user to easily replace the accelerometer component when the accelerometer breaks. Furthermore, the user can easily remove accelerometer when using the golf club during a game. This will eliminate the excess weight from the accelerometer. Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify Storek's golf club, and incorporate a removable accelerometer module as taught by Petrash, in order to have the accelerometer module removably mounted within the head of the golf club for the purposes of replacing the accelerometer and eliminating the excess weight during game play.

Furthermore, it is obvious to have elements of an apparatus separable. Having a removable accelerometer module would allow the user to easily remove the accelerometer module for the purpose of using the golf club without the accelerometer. *See In re Dulberg.*

2. Storek in view of Petrash discloses an instrumented golf club as discussed above. However, Storek in view of Petrash fails to teach that the weight of the first accelerometer and thee second accelerometer do not change the balance or center of gravity of the club. Nevertheless, it would have been obvious to one of ordinary skilled in the art to design the attachments of the accelerometers to not change the center of gravity of club. Having an offset balance golf club will affect a user's swing. Having the accelerometers so they do not change the balance or center of gravity of the club will allow the user to swing the instrumented golf club as if it were a normal golf club.

Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify Storek's instrumented golf club, and have the balance or center of gravity of the club unchanged in order to allow the user to swing the instrumented golf club as if it were a normal golf club.

5. Storek in view of Petrash discloses the instrumented golf club of claim 1, wherein the first accelerometer module senses acceleration along three orthogonal axes (Storek, paragraphs 27, 42, 49, 51-55, 69, 71-72).

10. Storek in view of Petrash discloses the instrumented golf club of claim 1, further including a transmission module that wirelessly transmits golf swing data (Storek, RF or IR, paragraph 84).

11. Storek in view of Petrash discloses a computer-readable medium containing computer-executable instructions for causing a transmission module embedded within a golf club to perform the steps of (Storek, hardware and software of the Inertial Navigation System, paragraph 5): receiving first golf swing data from a first accelerometer module mounted in a head of the golf club; receiving second golf swing data from a second accelerometer module mounted in a shaft of the golf club; and transmitting the first and second golf swing data (Storek, Inertial Navigation System 10 in Figs. 1 and 4, paragraphs, 39, 41-44, 49, 51-55, 69, 84).

3, 4. Storek in view of Petrash discloses the claimed invention except the head of the golf club is a wood or iron. However it is notoriously well known in the art that wood or iron is used for the head of a golf club. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the head of the golf club wood or iron since it was known in the art to use wood or iron for the head of golf clubs.

Claims 7-8, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Storek (US 2004/0259651) in view of Petrash as applied to claim 1, 11 above, and further in view of Gedney et al. (US 5,209,483).

7, 8. Storek in view of Petrash discloses a training golf club that specifically analyzes the swing of the user as discussed above. However, Storek fails to teach the golf club includes an impact module configured to sense the location of impact with a golf ball, wherein the impact module comprises an array of strain gauges. Storek specifically discloses a training golf club that specifically measures the swing of the user. Nevertheless impact modules for golf clubs are well known in the art. In an analogous art to training golf clubs, Gedney discloses a golf club including an impact module configured to sense the location of impact with a golf ball, wherein the impact module comprises an array of strain gauges (Force sensors, Figs. 1-2B). Storek's training golf club is used to measure the force and the location the ball was hit in respect to the golf club's head (cols. 1-9). Therefore it would have been obvious to one

of ordinary skilled in the art at the time the invention was made to modify Storeks training golf club that analyzes the swing of the user and incorporate Gedney impact module configured to sense the location of impact with a golf ball, wherein the impact module comprises an array of strain gauges in order to provide a golf club that can also be used measure the force and the location the ball was hit in respect to the golf club's head.

12. See claim 7 above. Furthermore Storek and Gedney discloses a computer-readable medium (Storek, paragraph 5; Gedney, cols. 6:19-27, 6:67-7:5).

Claims 9, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Storek (US 2004/0259651) in view of Petrash and in view Gedney et al. (US 5,209,483) as applied to claims 7 and 12 above, and further in view of McTeigue. (US 5,221,088).

9. Storek in view of Petrash and Gedney discloses the claimed invention as discussed above but fails to teach golf club includes a grip pressure sensor. However it is well known in the art to provide grip pressure sensors for sporting apparatuses. In an analogous art to golf clubs that measures and analysis's the golf swing, McTeigue discloses golf club with a grip pressure sensor. McTeigue discloses the grip pressure sensor is used as a training aid, by help users learn to maintain a relatively light and constant grip pressure while swinging the golf club (col. 4:24-43). Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was

made to modify Storek in view of Gedney's invention and incorporate a grip pressure sensor in order to train users in maintaining a relatively light and constant grip pressure while swinging the golf club.

13. See rejection for claim 9 above. Furthermore Storek and McTeigue discloses a computer readable medium (Storek, paragraph 5; McTeigue, col. 7:44-51).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Storek (US 2004/0259651) in view of Petrash as applied to claim 1, and further in view of Evans (US 3,792,863) as supported by Lagerblade (US 1,444,842).

6. Storek in view of Petrash discloses the instrumented golf club as discussed in claim 1, wherein the golf swing data is transmitted to computer through radio frequency or infrared (Storek, paragraph 84). However, Storek in view of Petrash fails to disclose an antenna that comprises a ferrule that connects the head of the golf club to the shaft of the golf club. Nevertheless, such features would have been obvious to incorporate as discussed below.

Storek in view of Petrash discloses transmitting golf swing data wirelessly to a computer. However Storek in view of Petrash fails to teach an antenna is used to transmit the data wirelessly. Nevertheless, using an antenna to transmit wireless data is well known in the art. In an analogous art to a golf swing measurement system, Evans discloses an antenna to transmit the data wirelessly. Evans further discloses the



shaft of the golf club may serve as a transmitting antenna (col. 2:17-19). Using the shaft of the golf club as an antenna, will efficiently radiate wireless signals without attaching an additional antenna to the golf club. Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify Storek's instrumented golf club and incorporate Evans' shaft as an antenna in order to provide an antenna to transmit wireless signals without attaching an additional antenna to the golf club.

Storek in view Petrash and in view of Evans significantly discloses the claimed invention as discussed above but fails to teach a ferrule that connects the head of the golf club to the shaft of the golf club. Nevertheless such modification is notoriously well known in the art. Storek in view of Petrash and in view of Evans discloses that parts of the golf club are used as an antenna. A ferrule of the golf club is considered as a part of the golf club. A ferrule is commonly used to connects the head of the golf club to the shaft of the golf club in order to secure the head of the golf club to the shaft of the golf club. Furthermore, the ferrule prevents the shaft from splitting. This is supported by Lagerblade (lines 102-108). Therefore it would have been obvious to modify Storek in view of Evans instrumented golf club, and incorporate Lagerblade's ferrule in order to prevent the shaft from splitting.

Furthermore, the specific location and part of the antenna is a design choice. Applicant specification (paragraph 29) discloses that the shaft can be used as the antenna or the antenna may be plated on to the shaft, grip or any other location. Applicant also discloses the ferrule may be formed of metal material or other type of

antenna material. Thus the specific type of material and the location of the antenna is clearly a design choice. As discussed above, Lagerblade discloses that the golf club shaft is used as an antenna, and Evans discloses that a ferrule is commonly connected to the shaft.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments with respect to claim 1 (previously claim 2) have been fully considered but they are not persuasive.

Applicants argue that Storek in view of Petrash fails to teach that the accelerometer module is removably mounted in a head of the golf club because Petrash's accelerometer is not in the head of the golf club. However, Petrash is not relied upon for teaching of where the accelerometer is located. As discussed in the rejection above, Storek discloses an accelerometer is located in the head of golf club. The Petrash reference is relied upon for the teaching of a removable accelerometer. Furthermore it is obvious to have elements of an apparatus removable. See *In re Dulberg*.

Regarding claim 6, Applicants argue that Lagerblade fails to teach an antenna that comprises a ferrule. However, the Lagerblade reference was used to support the teaching that ferrule are common parts of the golf club. Evans discloses the parts of the golf are used as an antenna. Thus the combination Lagerblade and Evan discloses that

the ferrule is used as an antenna. Furthermore, the specific location and part of the antenna is a design choice. Applicant specification (paragraph 29) discloses that the shaft can be used as the antenna or the antenna may be plated on to the shaft, grip or any other location. Applicant also discloses the ferrule may be formed of metal material or other type of antenna material. Thus the specific type of material and the location of the antenna is clearly a design choice. As discussed above, Lagerblade discloses that the golf club shaft is used as an antenna, and Evans discloses that a ferrule connects to the shaft.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jasson H. Yoo whose telephone number is (571)272-5563. The examiner can normally be reached on 9:00am - 5:00am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert E. Pezzuto can be reached on (571) 272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert E Pezzuto/  
Supervisory Patent Examiner, Art Unit 3714

JHY